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ABSTRACT

Arguing that the foundation of a free civilization is an informed citizenry, this ERIC digest discusses the new challenges faced by the government and libraries in the wake of the Information Age. As electronic technology has accelerated the production and transmission of information, it has become more difficult for the average citizen to access, locate, and interpret information. As a result, the role of libraries as gateways to information, most notably government depository libraries, has become even more essential. The growing availability of electronically based public information carries both benefits--i.e., more information can be tapped more rapidly--and costs. Some of these costs and issues are: the need for the formation of government information dissemination policies; the effects of the privatization of information sources; the lack of usability of government information by the user; and equity of access. Providing a gateway to networks of electronic information is only one of the challenges facing libraries: libraries must also act as guides and educators. It is concluded that libraries must interact effectively with the government, educational institutions, and the commercial sector to successfully meet the information needs of citizens in a 21st-century democracy. (9 references) (MAB)

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Information Technology and the Informed Citizen:

New Challenges for Government and Libraries

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by Charles S. White

Thomas Jefferson wrote:

> If a Nation expects to be ignorant and free in a state of civilization, it expects what never was and never will be.... [I]f we are to guard against ignorance and remain free, it is the responsibility of every American to be informed. (Letter to Colonel Charles Yancey, January 6, 1816)

The link between popular government and an informed citizenry was a theme that ran throughout Jefferson's writings and efforts, from the establishment of the University of Virginia to his advocacy of public libraries. Every generation since has faced the challenge of achieving an informed citizenry that is capable of making reasoned decisions and acting on those decisions. The current generation of citizens is faced with a three-fold challenge made more difficult by the volume and complexity of information relevant to public affairs: (1) how to access information, (2) how to find the best information for the given task, and (3) how to make sense of the information once obtained (that is, how to transform information into useful knowledge). The burden of citizens in becoming informed has increased dramatically as electronic technology has accelerated the production and transmission of information. As in Jefferson's time, libraries continue to be essential institutions as people in the "Information Age" grapple with their responsibility to become informed.

Information Access: Libraries as Gateways

Arguably the largest generator of information relevant to public affairs is government, especially at the federal level. Significant amounts of data are collected and processed annually. While substantial legislative and regulatory action has been directed at rationalizing federal information policies regarding the collection and management of government information, relatively little attention has been focused until recently on dissemination, the final phase of the information cycle. This is especially true of information in electronic formats.

Recognizing its obligation to make government information accessible to citizens, Congress established the Government Printing Office (GPO) (1895) and the Depository Library System (1962). The latter now comprises 1,400 libraries nationwide, as well as 53 Regional Depository Libraries, whose purpose is to provide the general public with the greatest possible access to government information. With the advent of electronic information systems, federal information dissemination policies and the traditional functions of libraries are strained in achieving the goal of informing the population.

According to an Office of Technology Assessment report (OTA, 1988), the number of civilian agency publications in paper format has been gradually declining, while those in electronic formats increased more than three-fold in the four years prior to the report. Pushed forward by an array of technological advances that show no signs of abating, the growing availability of electronically based public information carries both benefits and costs. On the benefit side, more information can be tapped more rapidly than ever before, including low-demand databases that heretofore could not be disseminated in a cost-effective manner through centralized production (via the GPO, for example).

Costs and Issues

On the cost side, however, are several thorny issues that must be addressed for the benefits to be realized. These issues are identified below.

Government information dissemination policies. How can we rationalize government dissemination of electronic information to ameliorate the current confusion of institutional roles and responsibilities (who publishes what)? Should federal agencies sell their databases or only services derived from those databases? Should agencies wholesale or retail their information products? How much should users (libraries and citizens) be charged for electronic information products, and does this depend on the relevance of the information to significant public policy issues (Bortnick, 1988)?

Privatization of information sources. The federal government spends in excess of $6 billion on information dissemination (OTA, 1988). In an era of budgetary reductions, and the likely expansion of electronic information products, how much can the government afford to pay for dissemination, and how much will it transfer to commercial database vendors? Will such a transfer mean relatively high user access fees, the elimination of low-profit databases that serve only specialized needs, copyright and similar controls over the public information such vendors sell, undue self-interested influence over the delivery of public information, and the concentration of information delivery services in a limited number of commercial vendors (Gapen et al., 1987)?

Usability of information by the user. Electronic information products are not always readily usable by the individual who needs

them. For example, some information might consist of raw data files on computer tape, requiring sophisticated hardware and statistical software at the user end. Who will provide and pay for these "value-added" interfaces that make electronic information more usable by those who need it (Gapen et al., 1987)?

Equity of access. Related to the previous issue is the cost one must pay to play in the electronic information game; namely, the hardware and software required to access electronic information. A good deal has been made of direct citizen access to information with the growing availability of inexpensive computers and communications software. Schuman (1990) reminds us, however, that 25 percent of households below the poverty level have no telephone, and only 13 percent of households own a computer (only 10 percent of these with modems). The more immediate likelihood is a growing gap between the information-rich and information-poor, with the latter unable to access the growing proportion of public information available only in electronic formats (Gapen et al., 1987).

As libraries continue to fulfill their roles as gateways to public information, it seems likely that they will assume increasing responsibility for providing access to electronic information sources. While maintaining access to existing print-based information, libraries will also have to grapple with the issues enumerated above, in collaboration with government agencies and commercial database vendors. Decisions will have to be made regarding which libraries will provide what levels of access to what electronic information products at what cost, based perhaps on particular characteristics of the information products (Gapen et al., 1987).

Finding the Right Information and Using it Effectively: Libraries as Guides and Educators

Providing a gateway to networks of electronic information is only one challenge facing libraries in the years to come. Libraries also serve as *guides*, not only filling specific information needs but solving information problems (Schuman, 1990). For the foreseeable future, the "expert system" people will use to seek answers to information problems will be librarians (more appropriately, *information specialists*), whose traditional expertise as information searchers will have to expand to navigate skillfully the growing web of interconnected electronic databases. A knowledgeable guide significantly lightens the burden users must bear in finding the information they need.

Libraries must also serve as *educators*, helping citizens to hone their own information problem-solving skills. The information specialist can help people to identify multiple perspectives on public policy issues, to clarify their questions, and to identify what information they need to answer their questions. Patrons also frequently seek help in *interpreting* the information they have found; that is, in converting information into knowledge. Such requests will likely multiply, as citizens are confronted with increasing volumes of information and with policy issues requiring greater understanding of scientific, technical, and social information.

A Multidimensional Challenge

This last point about constructing knowledge from information underscores how complex is the contemporary challenge to build a solid foundation for an informed citizenry. Neither access nor guidance nor skill development alone is sufficient to the task. All three supports must be in place. This suggests the need for multiple institutions to change, individually and in concert. Government information policies need to be rationalized, and education institutions serving children and adults must focus more attention on the construction of knowledge. Finally, libraries must interact effectively with government, education institutions, and the commercial sector. The functions of libraries as gateways, guides, and educators must expand and change to meet the information needs of citizens in a 21st-century democracy.

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